

## Abstracts

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eight percent would consider the information when prescribing. Seventy-five percent of the profiled physicians who responded agreed that the profiles were informative and useful, and 67% would consider the information in their prescribing decisions. **CONCLUSION:** Providing antibiotic prescribing profiles for physicians may influence prescribing patterns and maintain cost in a managed care setting.

## PIN28

# MEDICOECONOMIC EVALUATION OF OUTPATIENT MANAGEMENT OF INFANTILE BRONCHIOLITIS IN FRANCE

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**OBJECTIVES:** To compare—in terms of effectiveness and costs—outpatient management of infantile bronchiolitis by homeopathic GPs vs allopathic GPs vs paediatricians. **METHODS:** A 6-month prospective, “real-world” study was carried out by setting up 3 observatories with: homeopathic GPs, allopathic GPs and paediatricians recruited by sample-drawing. Patients aged between 3 and 24 months, consulting for first bout of acute bronchiolitis since birth, who had not yet received treatment and who did not require immediate hospitalisation were included. Effectiveness (number and duration of bouts, number of complications, persistence of bronchial obstruction), direct medical costs (from the French Health Insurance and societal perspectives) and indirect costs (sick leaves) were assessed. The statistical analysis was performed after matching patients to have comparable patients. **RESULTS:** One hundred seventeen, 150 and 253 patients were respectively included by 38 homeopathic GPs, 59 allopathic GPs and 95 paediatricians. At the end of the study, there were: no significant differences between the management by homeopathic GPs vs allopathic GPs on effectiveness criteria; no significant differences between the management by homeopathic GPs vs paediatricians in terms of number of bouts, persistence of bronchial obstruction but significant shorter duration of bouts (4.4 vs 6.6 days) and less complications (0.20 vs 0.40 complication/patient) in the homeopathic group. In Health Insurance perspective, the management by homeopathic GPs was significantly less expensive than the management by allopathic GPs and paediatricians (116, 146, 217 €/patient respectively). In the societal perspective, the management by homeopathic GPs was significantly less expensive than the management by paediatricians (215 vs 361 €/patient) but equivalent to the management by allopathic GPs. Homeopathic GPs prescribed equivalent number of sick leaves to paediatricians but significantly less than allopathic GPs. **CONCLUSION:** These results could help public policy makers and practitioners in providing new available data concerning the outpatient management and cost of infantile bronchiolitis, that is a public health concern in France.

## PIN29

# THE ECONOMIC EVALUATION OF INFLUENZA VACCINATION IN THE ELDERLY POPULATION: A MODEL BASED ON BAYESIAN NETWORKS

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**OBJECTIVES:** Influenza infection is a major cause of illness, morbidity and mortality throughout the world, mainly among the elderly. Since vaccination has proven to be effective in the

reduction of all acute complications, deciding whether to implement a vaccination campaign, and which vaccine(s) to prescribe is an important task. The aim of this work is to build a decision model, which allows the decision-makers to evaluate the possible results under different scenarios, and to choose the decision associated to the highest expected utility, in terms of incremental cost effectiveness ratio (ICER). **METHODS:** The analysis is based on the Bayesian Networks. We developed a network that combines information from an observational study conducted in Pianiga (Italy) from a group of GPs (Family Medicine Group), with literature and experts data. This information was used to create a graph model, which encodes the set of conditional independencies among the variables. The probabilities of the relevant events (mortality and resources consumption) are calculated using the network. A (dis)utility function, represented by direct costs, is associated to the decision of implementing or not the vaccination campaign with a given vaccine. The ICER is then derived for several possible scenarios. **RESULTS:** The MF59 vaccine proves to be more cost-effective, as compared to both the non-vaccination and the standard vaccine. This result is consistent through several scenarios, built upon varying parameters such as coverage and attack rates. In the basic scenario, obtained by observed data, MF59 allows a saving of 16,444€ per death averted, with respect to standard vaccine, and a saving of 2718 € per death averted as compared to non vaccination. **CONCLUSIONS:** Using Bayesian Networks can help structure the decision problem and allow for a direct multivariate stochastic sensitivity analysis. The use this tool is in our opinion highly valuable, yet not established, in health economics.

## PIN30

# OBSERVATIONAL STUDY ON THE “REAL LIFE” PRACTICE AND COST OF ANTIBIOTIC (AB) MEDICATION IN PNEUMOCOCCAL PNEUMONIA PATIENTS: PARENTERAL VERSUS STEP DOWN THERAPY (SDT)

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**OBJECTIVES:** In this observational study, we analyzed the minimum basic data sets (MBDS) together with the associated medication costs, relating to stays from 11 hospitals. We focused on Pneumonia stays considering the effect of antibiotic treatment (SDT versus parenteral therapy), stay parameters and patient characteristics on length of stay (LOS) and the resulting antibiotic national insurance cost. **METHODS:** Belgian hospitals register case mix data for admissions in MBDS: we extracted anonymous medical data and prescribed drug cost data from stays of 11 peripheral Flemish hospitals (during 2001). MBDS contains ICD-9-CM codes and performed procedures as well as other stay parameters (severity, risk of mortality, LOS), patient characteristics (age, gender) and drug utilization data. Data were stored in MS Access 2000 and analyzed in SPSSWIN 12.0. Stays were considered independent; LOS and cost data were log transformed to obtain homoscedasticity. **RESULTS:** The database contained 302,704 patient stays: 6742 relate to pneumonia. Pneumococcus pneumonia was reported in 472 stays (461 patients). Mean (SD) LOS was 16.3 (21.9) days; 89 % of the admissions were unscheduled. Mortality was 8.1%. The frequency of antibiotic use was: Amoxicillin-Clavulanate 63.9%, cephalosporins third generation 30.8%, quinolones 16.8%, cephalosporins second generation 15.7%, macrolides 15.7%, aminoglycosides 15.3%. In 48.9% one, in 25% two and in 12% three AB-classes were administered. 37.7% SDT therapy was used. LOS was unaffected by SDT but there was a significant effect ( $p < 0.001$  Anova) of age, stay severity and the